

BEARING PRESSURE BALANCE APPARATUS

ABSTRACT OF THE DISCLOSURE

- 5 The present invention provides a method and apparatus for balancing the pressure across a front bearing in a compressor housing. The present invention may protect the bearing from lubricant migration by eliminating pressure differentials across the bearing. When a blower or fan is running, the bearing experiences the same pressure differential that is across the blower.
- 10 Unless this pressure is balanced, lubricant may migrate from the bearing very quickly. The present invention may provide a pressure balance and sealing across the front bearing of a blower or fan. A plurality of grooves on the face of a compressor impeller and a plurality of grooves on a compressor shaft surface restrict the gas flow to balance pressure across a bearing. Alternatively, a
- 15 labyrinth seal may cooperate with a plurality of grooves on the face of a compressor impeller to balance pressure across the bearing.